

[CONTENT ADDRESSABLE MEMORY STRUCTURE]

Abstract

A structure, apparatus and method for reducing the power requirement of CAM memories, where the memory cells of the memory array are divided into groups of rows of multiple memory segments. Each memory segment has its own search driver and is searched separately. The memory segments are also searched in a prescribed order. If the search data is found in a particular memory segment, the search is stopped, leaving subsequent memory segments unsearched. By searching memory segments only until the search data is found, match lines of the subsequent memory segments are not unnecessarily discharge and recharged thereby reducing the current demands placed upon the power supply by the CAM memory. A selectable option to do a full search of the CAM memory is also provided for when the power supply is able to meet such current demands.